

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Tatsumi et al.

Art Unit: 2889

Application No: 10/554,188

Examiner: E. Breval

Confirmation No: 2644

Filed: October 21, 2005

Atty. Docket No: 40616-286346

For: DIAMOND ELECTRON EMITTER AND
ELECTRON BEAM SOURCE USING
SAME

Customer No:

26694

PATENT TRADEMARK OFFICE

STATEMENT OF THE SUBSTANCE OF THE INTERVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Interview Summary mailed July 7, 2010, Applicants submit the following Statements of the Substance of the Interview.

Participants: (1) Examiner Elmito Breval, (2) Examiner Busuk Won, (3) Michael E. Nelson (Applicants' Representative), and (4) Steve Schwarz (Applicants' Representative)

Date of Interview: April 29, 2010

Type: Telephonic

A) Brief Description of the Nature of any Exhibit Shown or any Demonstration Conducted:

None.

B) Identification of the Claims Discussed: 1 and 17.

C) Identification of Specific Prior Art Discussed: JP 04-245135 and JP 10-294077

D) Identification of the Principal Proposed Amendments of a Substantive Nature:

Claim 1 (currently amended): A diamond electron emission device comprising:

a light emitting device for irradiating light to
a cathode, wherein at least having an electron emission face [[is]] made of diamond; and
a light emitting device comprising the cathode and another element of the light emitting device forming a junction with the cathode;

~~the light emitting device comprises a junction formed between the cathode and another element of the electron emission device~~

wherein the light emitting device generates light at the junction and at least a portion of the light irradiates through the cathode toward the electron emission face.

Claim 17 (currently amended): An electron beam source utilizing a diamond electron emission device, comprising:

a cathode having an electron emission face made of diamond; and

~~wherein a light emitting device for irradiating [[a]] the cathode and a cathode, in which at least an electron emission face is diamond, wherein the light emitting device and the cathode are disposed together in an electron gun; and [[,]]~~

an anode separated by a space from said electron emission face;

wherein the light emitting device comprises the cathode and another element of the light emitting device forming a junction formed between with the cathode and another element of the electron emission device, and the light emitting device generates light at the junction and at least a portion of the light irradiates through the cathode toward the anode.

E) Substance of Interview: Claims 1 and 17 were discussed, and how the proposed amendments overcome the previous rejections of the claims.

F) Other Pertinent Matters Discussed: The Examiner requested Applicants to include, in the next response, a discussion of the use of the phrase "another element of the light emitting device" that forms the light-emitting junction with the cathode. Applicants representatives agreed to do so.

G) General Results or Outcome of the Interview: Agreement was reached that Examiner would update search when the response was filed.

Dated: July 16, 2010

Respectfully submitted,

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